

# Notice of Allowability

Application No.

09/943,770

Examiner

Erin M. File

Applicant(s)

LEARNED, RACHEL E.

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/24/2005.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ The drawings filed on 31 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance                        |
|   | 9. <input type="checkbox"/> Other _____  |

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert K. Tendler, Reg. No. 24,581 on 3/30/2005.

1. The application has been amended as follows:

Claim 6. The parameter estimation unit of Claim 2, wherein said multi-user detection system includes a tracking unit for acquired signals, and wherein in the presence of a new signal in the acquisition channel of said parameter estimation unit estimates the channel transfer function prior to signal switching from an ~~the~~ acquisition channel to the traffic channel, with said parameter estimation unit parameters being passed to said tracking unit thereafter.

Claim 8. The parameter estimation unit of Claim 6, wherein all received signals have training portions, and wherein for a second interfering signal ~~and~~ assigned to said traffic channel, said parameter estimation unit recreates the training signal portion of every received signal prior to the last received signal and subtracts the recreated training signals from the training portion of the last received signal to

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provide an estimate solely due to the last received signal during the training signal portion, thus to allow an estimate of the last signal from which to calculate parameters of the last signal.

Claim 9. The parameter estimation unit of Claim 2, wherein after initial estimate generation, said multi-user detection system simultaneously tracks all signals in a ~~said~~ traffic channel.

Claim 11. In a multi-user detection system in which interfering signals are purposely allowed to exist, a parameter estimation unit for use in conjunction with a signal separation unit for estimating channel transfer function parameters from channel transfer functions, comprising: a signal processor for determining said channel transfer functions for each received signal; and, means coupled to said channel transfer function determining signal processor for providing uninterrupted estimates of the channel transfer function parameters on a real-time basis, said multi-user detection system including a tracking unit for acquired signals, and in the presence of a new signal in an ~~the~~ acquisition channel of said parameter estimation unit estimating the channel transfer function prior to signal switching from the acquisition channel to a traffic channel, with said parameter estimation unit parameters being passed to said tracking unit thereafter, all received signals having training portions, a second interfering signal being and assigned to said traffic channel, said parameter estimation unit recreating the training signal portion of every received signal prior to the last received signal and subtracting

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the recreated training signals from the training portion of the last received signal to provide an estimate solely due to the last received signal during the training signal portion, thus to allow an estimate of the last signal from which to calculate parameters of the last signal.


2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erin File

3.30.2005

  
**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINEE**  
**TECHNOLOGY CENTER 2800**